

What is claimed is:

1 1. A system for negotiating multi-path connections between a
2 plurality of intermediary devices in a networked computing environment,
3 comprising:
4 a client-side network protocol stack defined on an intermediary device
5 available from a plurality of intermediary devices on a primary communications
6 channel and establishing a client-side connection between a requesting client and
7 the intermediary device in accordance with a connection-oriented network
8 protocol;
9 a server-side network protocol stack establishing a server-side connection
10 between the intermediary device and the requested server on a primary
11 communications channel in accordance with the connection-oriented network
12 protocol;
13 a synchronization module determining differences in connection
14 parameters defined for the client-side connection and the server-side connection
15 and communicating the connection parameter differences to at least one other
16 such intermediary device over an out-of-band communications channel.

1 2. A system according to Claim 1, further comprising:
2 the synchronization module communicating a service request initially
3 received from the requesting client to the at least one other such intermediary
4 device while establishing the client-side connection over the out-of-band
5 communications channel.

1 3. A system according to Claim 1, further comprising:
2 the synchronization module deferring communicating the connection
3 parameter differences for transitory connections.

1 4. A system according to Claim 1, wherein the out-of-band
2 communications channel comprises at least one of a broadcast, multicast, or
3 point-to-point channel.

1 5. A system according to Claim 1, wherein the connection-oriented
2 network protocol comprises the Transmission Control Protocol (TCP).

1 6. A system according to Claim 1, wherein the intermediary device
2 comprises at least one of a firewall and a boundary controller.

1 7. A method for negotiating multi-path connections between a
2 plurality of intermediary devices in a networked computing environment,
3 comprising:
4 establishing a client-side connection between a requesting client and an
5 intermediary device available from a plurality of intermediary devices on a
6 primary communications channel in accordance with a connection-oriented
7 network protocol;
8 establishing a server-side connection between the intermediary device and
9 the requested server on a primary communications channel in accordance with the
10 connection-oriented network protocol;
11 determining differences in connection parameters defined for the client-
12 side connection and the server-side connection; and
13 communicating the connection parameter differences to at least one other
14 such intermediary device over an out-of-band communications channel.

1 8. A method according to Claim 7, further comprising:
2 communicating a service request initially received from the requesting
3 client to the at least one other such intermediary device while establishing the
4 client-side connection over the out-of-band communications channel.

1 9. A method according to Claim 7, further comprising:
2 deferring communicating the connection parameter differences for
3 transitory connections.

- 1 10. A method according to Claim 7, wherein the out-of-band
2 communications channel comprises at least one of a broadcast, multicast, or
3 point-to-point channel.
- 1 11. A method according to Claim 7, wherein the connection-oriented
2 network protocol comprises the Transmission Control Protocol (TCP).
- 1 12. A computer-readable storage medium holding code for performing
2 the method of Claim 7.
- 1 13. A system for communicating routing information between a
2 plurality of link layer intermediary devices in a networked computing
3 environment, comprising:
4 a link layer intermediary device available from a plurality of link layer
5 intermediary devices receiving a session packet from a requesting client;
6 an encapsulation module generating an echo request packet identified as
7 originating from the requesting client and addressed to a requested server and
8 encapsulating the session packet within the echo request packet;
9 the link layer intermediary device forwarding the echo request packet to
10 the requested server;
11 at least one other such link layer intermediary device receiving an echo
12 response packet from the requested server;
13 an unencapsulation module unencapsulating session packet from within
14 the echo response packet and retrieving routing information from the session
15 packet; and
16 the least one other such link layer intermediary device forwarding a
17 response packet to the requesting client.
- 1 14. A system according to Claim 13, wherein the echo request packet
2 is an Internet Control Message Protocol (ICMP) echo request packet and the echo
3 response packet is an ICMP echo response packet.

1 15. A system according to Claim 13, wherein the connection-oriented
2 network protocol comprises the Transmission Control Protocol (TCP).

1 16. A system according to Claim 13, wherein the intermediary device
2 comprises at least one of a firewall and a boundary controller.

1 17. A method for communicating routing information between a
2 plurality of link layer intermediary devices in a networked computing
3 environment, comprising:
4 receiving a session packet from a requesting client on a link layer
5 intermediary device available from a plurality of link layer intermediary devices;
6 generating an echo request packet identified as originating from the
7 requesting client and addressed to a requested server and encapsulating the
8 session packet within the echo request packet;
9 forwarding the echo request packet to the requested server;
10 receiving an echo response packet from the requested server on at least
11 one other such link layer intermediary device;
12 unencapsulating session packet from within the echo response packet and
13 retrieving routing information from the session packet; and
14 forwarding a response packet to the requesting client.

15 18. A method according to Claim 17, wherein the echo request packet
16 is an Internet Control Message Protocol (ICMP) echo request packet and the echo
17 response packet is an ICMP echo response packet.

1 19. A method according to Claim 17, wherein the connection-oriented
2 network protocol comprises the Transmission Control Protocol (TCP).

1 20. A computer-readable storage medium holding code for performing
2 the method of Claim 17.